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STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

OMETZ, DAVID LOUIS

ART UNIT	PAPER NUMBER
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2653

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9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/982,168

Applicant(s)

PARK ET AL.

Examiner

David L. Ometz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 and 24-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-22 and 24-40 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5, 6. 6) ☐ Other: _____

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1. In view of the newly disclosed references to Chinese 2342438 and JP-2000-90654, the indicated allowability of claims 4-5, 7, 12, 13, 21, 22, 24-26, 30, 31 is withdrawn and a new grounds of rejection appears below.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4, 5, 11, 14-22, 24, 25, 27-31, 35, 37-39 are rejected under 35 U.S.C. 102(b) as being anticipated by JP-2000-90654. JP'654 shows a dynamic vibration absorber for a disk player that records and/or reproduces data to and from a disk in figures 1-3, 5, comprising:

As per claim 1, a deck base (inherent); a deck plate 1 movably supported by said deck base to support a spindle motor 5 that spins the disk 6; a mass body 2 disposed around said deck plate 1; and a flexibly changeable connection member 3 having a first end that connects with and extends through said deck plate 1 and a second end that connects with said mass body 2 so as to allow a reciprocal action between said mass body and said deck plate, wherein the reciprocal action of said mass body and said connection member reduces a vibration generated when the disk spins.

As per claim 4, JP'654 shows a dynamic vibration absorber for a disk player that records and/or reproduces data to and from a disk 6, comprising: a deck base (inherent); a deck plate 1 movably supported by said deck base to support a spindle motor 5 that spins the disk 6; a mass body 2 disposed around said deck plate 1; and a flexibly changeable connection member 3 that

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connects said deck plate and said mass body so as to allow a reciprocal action between said mass body and said deck plate, wherein: the reciprocal action of said mass body 2 and said connection member 3 reduces a vibration generated when the disk spins, and said connection member 3 comprises: a body that is flexibly changeable by an external force and has an internal space to allow compression; a first flange portion extending from the body to support said mass body; and a second flange portion extending from the body to fit into said deck plate to be supported by said deck plate.

As per claim 5, the dynamic vibration absorber for a disk player of claim 4, wherein said deck plate 1 has a connection hole through which the second flange portion extends to be supported by said deck plate 1.

As per claim 11, the dynamic vibration absorber for a disk player of claim 1, wherein said mass body 2 is disposed on a side of said deck plate to reduce a vibration in a direction perpendicular to the side of said deck plate.

As per claim 14, the dynamic vibration absorber for a disk player of claim 1, further comprising additional mass bodies 2 and corresponding connection members 3 attached to said deck plate 1.

As per claim 15, the dynamic vibration absorber for a disk player of claim 1, further comprising a supporting member 4 to support said deck plate 1 at a supporting point, and a viscoelastic member 4 disposed at the supporting point of said deck plate to reduce an effect of an outer shock transmitted between said deck plate 1 and said deck base (inherent).

As per claim 16, a dynamic vibration absorber for a disk player that records and/or reproduces data to and from a disk, comprising: a deck base (inherent); a deck plate 1 movably supported by

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said deck base to support a spindle motor 5 that spins the disk 6; a mass body 2 disposed around said deck plate 1; and a flexibly changeable connection member 3 that connects said deck plate and said mass body so as to allow a reciprocal action between said mass body and said deck plate, wherein: the reciprocal action of said mass body 2 and said connection member 3 reduces a vibration generated when the disk spins. As per the limitation of "said mass body and said connection member comprise a combined member using an injection molding process", a "product by process" claim is directed to the product per se, no matter how actually made, see **In re Hirao**, 190 USPQ 15 at 17 (footnote 3, CCPA, 5/27/76); **In re Brown**, 173 USPQ 685 (CCPA 5/18/72); **In re Luck**, 177 USPQ 523 (CCPA, 4/26/73); **In re Fessmann**, 180 USPQ 324 (CCPA, 1/10/74); **In re Thorpe**, 227 USPQ 964 (CAFC, 11/21/85). The patentability of the final product in a "product by process" claim must be determined by the product itself and not the actual process and an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not.

As per claim 17, a dynamic absorber for use in a disk player that records and/or reproduces data to and from a disk 6: which includes a movable plate 1 that supports a spindle motor 5 used to spin the disk 6, the absorber comprising: a flexible connection member 3 adapted to be connected to the movable plate; and a mass body 2 connected to said connection member, wherein: said connection member 3 and said mass body 2 move relative to the movable plate 1 so as to absorb a vibration generated when the disk spins, and said connection member 3 comprises a body, and flanges extending outward from the body to support said mass body 2 apart from the movable plate 1.

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As per claim 18, the dynamic absorber of claim 17, wherein said connection member 3 and said mass body 2 move in a non-parallel direction to an axis of rotation of the disk to absorb a vibration along the axis of rotation of the disk.

As per claim 19, the dynamic absorber of claim 18, wherein said connection member 3 and said mass body 2 move in a direction perpendicular to the axis of rotation of the disk.

As per claim 20, the dynamic absorber of claim 17, wherein said connection member 3 and said mass body 2 move in a direction parallel to an axis of rotation of the disk to absorb a vibration moving along the axis of rotation of the disk.

As per claim 21, a dynamic absorber for use in a disk player that records and/or reproduces data to and from a disk, which includes a movable plate 1 that supports a spindle motor 5 used to spin the disk 6, the absorber comprising: a flexible connection member 3 adapted to be connected to the movable plate 1; and a mass body 2 connected to said connection member 3, wherein: said connection member 3 and said mass body 2 move relative to the movable plate 1 so as to absorb a vibration generated when the disk spins, and the dynamic absorber has roughly a same natural resonance frequency as the movable plate (see fig. 5, about 30 Hertz).

As per claim 22, the dynamic absorber of claim 21, wherein said mass body 2 has a mass and said connection member has a spring constant such that the dynamic absorber has roughly the same natural resonance frequency (see fig. 5, about 30 Hertz) as the movable plate 1.

As per claim 24, the dynamic absorber of claim 17, wherein the body comprises neck portions connecting the body and the flanges, said mass body 2 is connected to said connection

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member at one of the neck portions, and said connection member 3 is adapted to be connected to a hole in the movable plate 1 at another one of the neck portions.

As per claim 25, the dynamic absorber of claim 24, wherein the body is wider than the neck portions.

As per claim 27, a recording and/or reproducing apparatus to record and/or reproduce data to and from a disk, comprising: a housing (inherent); a deck plate 1 movably supported within said housing, said deck plate 1 having a predetermined frequency (see fig. 5, from 20-100 Hertz); an optical head movably supported within said housing to record and/or reproduce the data to and from the disk 6; a spindle motor 5 supported by said deck plate 1 and which spins the disk; and a dynamic absorber 2/3 having a frequency that roughly corresponds to the predetermined frequency of said deck plate so as to absorb a vibration generated when the disk spins, the dynamic absorber comprising an elastic member 3 extending through the deck plate and supporting a mass body 2 apart from the deck plate 1.

As per claim 28, the recording and/or reproducing apparatus of claim 27, wherein the predetermined frequency of said deck plate comprises a natural frequency (about 30 Hertz from fig. 5) of said deck plate.

As per claim 29, the recording and/or reproducing apparatus of claim 27, wherein: the elastic member 3 comprises: a flexible connection member which is connected to said deck plate, and the mass body 2 is connected to the connection member; and the connection member and the mass body move relative to said deck plate so as to absorb the vibration generated when the disk spins.

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As per claim 30, a recording and/or reproducing apparatus to record and/or reproduce data to and from a disk, comprising: a housing (inherent); a deck plate 1 movably supported within said housing, said deck plate 1 having a predetermined frequency; an optical head movably supported within said housings to record and/or reproduce the data to and from the disk; a spindle motor 5 supported by said deck plate 1 and which spins the disk 6; and a dynamic absorber 2/3 having a frequency that roughly corresponds to the predetermined frequency of said deck plate so as to absorb a vibration generated when the disk spins, wherein: said dynamic absorber comprises: a flexible connection member 3 connected to said deck plate 1, and a mass body 2 connected to the connection member 3, the connection member and the mass body move relative to said deck plate so as to absorb the vibration generated when the disk spins, and the mass body has a mass and the connection member has a spring constant such that said dynamic absorber has roughly the same natural resonance frequency as said deck plate (about 30 Hertz).

As per claim 31, a recording and/or reproducing apparatus to record and/or reproduce data to and from a disk, comprising: a housing (inherent); a deck plate 1 movably supported within said housing, said deck plate 1 having a predetermined frequency; an optical head movably supported within said housing to record and/or reproduce the data to and from the disk; a spindle motor 5 supported by said deck plate and which spins the disk; and a dynamic absorber 2/3 having a frequency that roughly corresponds to the predetermined frequency of said deck plate (from 20-100 Hertz) so as to absorb a vibration generated when the disk spins, wherein: said dynamic absorber comprises: a flexible connection member 3 connected to said deck plate 1, and a mass body 2 connected to the connection member 3, the connection member and the mass body move relative to said deck plate so as to absorb the vibration generated when the disk

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spins, and the connection member comprises a body, and flanges extending outward from the body to support said mass body 2 apart from said deck plate 1.

As per claim 32, the recording and/or reproducing apparatus of claim 28, wherein said dynamic absorber is attached to said deck plate at a point where said deck plate experiences a maximum vibration amplitude (i.e. the outer edge of the deck plate 1).

As per claim 35, the recording and/or reproducing apparatus of claim 27, wherein said dynamic absorber further comprises flexible connection members 3 connected to said deck plate 1 at corresponding attachment points, and mass bodies 2 connected to corresponding ones of the connection member; and the connection members 3 and the mass bodies 2 move relative to said deck plate so as to absorb the vibration generated when the disk spins.

As per claim 37, a dynamic vibration absorber for a disk player that records and/or reproduces data to and from a disk, comprising: a deck base (inherent); a deck plate 1 movably supported by said deck base to support a spindle motor 5 that spins the disk 6; a mass body 2 disposed around said deck plate 1; and a flexibly changeable connection member 3 that connects said deck plate 1 and said mass body 2 so as to allow a reciprocal action between said mass body 2 and said deck plate 1, wherein: the reciprocal action of said mass body and said connection member reduces a vibration generated when the disk spins, and said mass body is disposed on a side of said deck plate 1 to reduce a vibration in a direction perpendicular to the side of said deck plate.

As per claim 38, and the process of "a combined member using an injection molding process," a "product by process" claim is directed to the product per se, no matter how actually made, see **In re Hirao**, 190 USPQ 15 at 17 (footnote 3, CCPA, 5/27/76); **In re Brown**, 173

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USPQ 685 (CCPA 5/18/72); *In re Luck*, 177 USPQ 523 (CCPA, 4/26/73); *In re Fessmann*, 180 USPQ 324 (CCPA, 1/10/74); *In re Thorpe*, 227 USPQ 964 (CAFC, 11/21/85). The patentability of the final product in a "product by process" claim must be determined by the product itself and not the actual process and an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not.

As per claim 39, the dynamic absorber of claim 17, wherein said mass body 2 comprises a plate comprising a hole therein, and the hole surrounds the body of said connection member 3.

4. Claims 1-5, 7-13, 15-22, 24-38, 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Chinese 2342438. CH'438 shows a vibration absorber for a disk player in figures 3A-11 that has:

As per claim 1, a dynamic vibration absorber for a disk player that records and/or reproduces data to and from a disk, comprising: a deck base 92 ; a deck plate 90 movably supported by said deck base 92 to support a spindle motor that spins the disk; a mass body 1 disposed around said deck plate; and a flexibly changeable connection member 30 having a first end that connects with and extends through said deck plate and a second end that connects with said mass body so as to allow a reciprocal action between said mass body and said deck plate, wherein the reciprocal action of said mass body and said connection member reduces a vibration generated when the disk spins.

As per claim 2, the dynamic vibration absorber for a disk player of claim 1, further comprising supporting members (fig. 11, "91" or as members "321" in figure 8B) to support said deck plate at predetermined support points which define a figure, wherein said mass body is

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placed at an outermost point from a geometrical center of the figure defined by the supporting points.

As per claim 3, the dynamic vibration absorber for a disk player of claim 1, further comprising supporting members (fig. 11, "91" or as members "321" in figure 8B) to support said deck plate at predetermined support points which define a figure, wherein said mass body is disposed at a predetermined place on said deck plate that has a largest vibration shift from a geometrical center of the figure defined by the supporting points (i.e. the outermost periphery of the deck plate 90 in figure 3B).

As per claim 4, a dynamic vibration absorber for a disk player that records and/or reproduces data to and from a disk, comprising: a deck base 92; a deck plate 90 movably supported by said deck base to support a spindle motor that spins the disk; a mass body 10 disposed around said deck plate 90; and a flexibly changeable connection member 30 that connects said deck plate and said mass body so as to allow a reciprocal action between said mass body and said deck plate, wherein: the reciprocal action of said mass body and said connection member reduces a vibration generated when the disk spins, and said connection member 30 comprises: a body (fig. 8B) that is flexibly changeable by an external force and has an internal space to allow compression; a first flange portion extending from the body to support said mass body; and a second flange portion extending from the body to fit into said deck plate to be supported by said deck plate.

As per claim 5, the dynamic vibration absorber for a disk player of claim 4, wherein said deck plate 90 has a connection hole through which the second flange portion extends to be supported by said deck plate.

As per claim 7, the dynamic vibration absorber for a disk player of claim 4, wherein said mass body 10 comprises a metallic plate having a connection opening cut from one end to allow insertion above the first flange (see fig. 3A).

As per claim 8, the dynamic vibration absorber for a disk player of claim 1, wherein said mass body is disposed above or below said deck plate to reduce a vibration in an upper and a lower direction relative to said deck plate.

As per claim 9, the dynamic vibration absorber for a disk player of claim 2, wherein said mass body is disposed above or below said deck plate to reduce a vibration in an upper and a lower direction relative to said deck plate.

As per claim 10, the dynamic vibration absorber for a disk player of claim 3, wherein said mass body is disposed above or below said deck plate to reduce a vibration in an upper and a lower direction relative to said deck plate.

As per claim 11, the dynamic vibration absorber for a disk player of claim 1, wherein said mass body is disposed on a side ("a side" being the top side in figure 3B) of said deck plate to reduce a vibration in a direction perpendicular to the side of said deck plate.

As per claim 12, a dynamic vibration absorber for a disk player that records and/or reproduces data to and from a disk, comprising: a deck base 92 ; a deck plate 90 movably supported by said deck base to support a spindle motor that spins the disk; a mass body 10 disposed around said deck plate 90; a flexibly changeable connection member 30 that connects said deck plate and said mass body so as to allow a reciprocal action between said mass body and said deck plate; and supporting members (fig. 11, "91" or as integral members "321" in figure 8B) to support said deck plate at predetermined support points which define a figure, wherein:

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the reciprocal action of said mass body and said connection member reduces a vibration generated when the disk spins, said mass body 10 is placed at an outermost point from a geometrical center of the figure defined by the supporting points, and said mass body is disposed on a side ("a side" being the top side) of said deck plate to reduce a vibration in a direction perpendicular to the side of said deck plate.

As per claim 13, a dynamic vibration absorber for a disk player that records and/or reproduces data to and from a disk, comprising: a deck base 92; a deck plate 90 movably supported by said deck base to support a spindle motor that spins the disk; a mass body 10 disposed around said deck plate; a flexibly changeable connection member 30 that connects said deck plate and said mass body so as to allow a reciprocal action between said mass body and said deck plate; and supporting members (fig. 11, "91" or as members "321" in figure 8B) to support said deck plate at predetermined support points which define a figure, wherein: the reciprocal action of said mass body and said connection member reduces a vibration generated when the disk spins, said mass body is disposed at a predetermined place (i.e. the outer periphery as shown in fig. 3B) on said deck plate that has a largest vibration shift from a geometrical center of the figure defined by the supporting points, and said mass body is disposed on a side ("a side" being the top side) of said deck plate to reduce vibration in a direction perpendicular to the side of said deck plate.

As per claim 15, the dynamic vibration absorber for a disk player of claim 1, further comprising a supporting member (fig. 11, "91" or as members "321" in figure 8B) to support said deck plate at a supporting point, and a viscoelastic member disposed at the supporting point

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of said deck plate to reduce an effect of an outer shock transmitted between said deck plate and said deck base.

As per claim 16, a dynamic vibration absorber for a disk player that records and/or reproduces data to and from a disk, comprising: a deck base 92; a deck plate 90 movably supported by said deck base to support a spindle motor that spins the disk; a mass body 10 disposed around said deck plate; and a flexibly changeable connection member 30 that connects said deck plate and said mass body so as to allow a reciprocal action between said mass body and said deck plate, wherein: the reciprocal action of said mass body and said connection member reduces a vibration generated when the disk spins. As per the process limitation of "said mass body and said connection member comprise a combined member using an injection molding process," a "product by process" claim is directed to the product per se, no matter how actually made, see **In re Hirao**, 190 USPQ 15 at 17 (footnote 3, CCPA, 5/27/76); **In re Brown**, 173 USPQ 685 (CCPA 5/18/72); **In re Luck**, 177 USPQ 523 (CCPA, 4/26/73); **In re Fessmann**, 180 USPQ 324 (CCPA, 1/10/74); **In re Thorpe**, 227 USPQ 964 (CAFC, 11/21/85). The patentability of the final product in a "product by process" claim must be determined by the product itself and not the actual process and an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not.

As per claim 17, a dynamic absorber for use in a disk player that records and/or reproduces data to and from a disk:, which includes a movable plate 90 that supports a spindle motor used to spin the disk, the absorber comprising: a flexible connection member 30 adapted to be connected to the movable plate 90; and a mass body 10 connected to said connection member, wherein: said connection member and said mass body move relative to the movable

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plate so as to absorb a vibration generated when the disk spins, and said connection member comprises a body (fig. 8B), and flanges extending outward from the body to support said mass body apart from the movable plate.

As per claim 18, the dynamic absorber of claim 17, wherein said connection member and said mass body move in a non-parallel direction to an axis of rotation of the disk to absorb a vibration along the axis of rotation of the disk.

As per claim 19, the dynamic absorber of claim 18, wherein said connection member and said mass body move in a direction perpendicular to the axis of rotation of the disk.

As per claim 20, the dynamic absorber of claim 17, wherein said connection member and said mass body move in a direction parallel to an axis of rotation of the disk to absorb a vibration moving along the axis of rotation of the disk.

As per claim 21, a dynamic absorber for use in a disk player that records and/or reproduces data to and from a disk, which includes a movable plate 90 that supports a spindle motor used to spin the disk, the absorber comprising: a flexible connection member 30 adapted to be connected to the movable plate; and a mass body 10 connected to said connection member, wherein: said connection member and said mass body move relative to the movable plate so as to absorb a vibration generated when the disk spins, and the dynamic absorber has roughly a same natural resonance frequency as the movable plate (see translation, bottom of page 15).

As per claim 22, the dynamic absorber of claim 21, wherein said mass body has a mass and said connection member has a spring constant such that the dynamic absorber has roughly the same natural resonance frequency as the movable plate (about 24 Hertz, see vibration graph).

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As per claim 24, the dynamic absorber of claim 23 17, wherein the body comprises neck portions connecting the body and the flanges, said mass body 10 is connected to said connection member at one of the neck portions, and said connection member is adapted to be connected to a hole in the movable plate 90 at another one of the neck portions.

As per claim 25, the dynamic absorber of claim 24, wherein the body is wider than the neck portions.

As per claim 26, the dynamic absorber of claim 2,3 17, wherein the body defines an opening therein, and the flanges include holes connecting the opening to an area external to the dynamic absorber.

As per claim 27, a recording and/or reproducing apparatus to record and/or reproduce data to and from a disk, comprising: a housing 92; a deck plate 90 movably supported within said housing, said deck plate having a predetermined frequency; an optical head movably supported within said housing to record and/or reproduce the data to and from the disk; a spindle motor supported by said deck plate and which spins the disk; and a dynamic absorber 30/10 having a frequency that roughly corresponds to the predetermined frequency of said deck plate (see translation, bottom of page 15) so as to absorb a vibration generated when the disk spins, the dynamic absorber comprising an elastic member 30 extending through the deck plate 90 and supporting a mass body 10 apart from the deck plate.

As per claim 28, the recording and/or reproducing apparatus of claim 27, wherein the predetermined frequency of said deck plate comprises a natural frequency of said deck plate (24 Hertz).

As per claim 29, the recording and/or reproducing apparatus of claim 27, wherein: the elastic member comprises: a flexible connection member 30 which is connected to said deck plate, and the mass body is connected to the connection member; and the connection member and the mass body move relative to said deck plate so as to absorb the vibration generated when the disk spins.

As per claim 30, a recording and/or reproducing apparatus to record and/or reproduce data to and from a disk, comprising: a housing 92; a deck plate 90 movably supported within said housing, said deck plate having a predetermined frequency; an optical head movably supported within said housings to record and/or reproduce the data to and from the disk; a spindle motor supported by said deck plate and which spins the disk; and a dynamic absorber 30/10 having a frequency that roughly corresponds to the predetermined frequency of said deck plate so as to absorb a vibration generated when the disk spins, wherein: said dynamic absorber comprises: a flexible connection member 30 connected to said deck plate 90, and a mass body 10 connected to the connection member 30, the connection member and the mass body move relative to said deck plate so as to absorb the vibration generated when the disk spins, and the mass body has a mass and the connection member has a spring constant such that said dynamic absorber has roughly the same natural resonance frequency as said deck plate (about 24 Hertz).

As per claim 31, a recording and/or reproducing apparatus to record and/or reproduce data to and from a disk, comprising: a housing 92; a deck plate 90 movably supported within said housing, said deck plate having a predetermined frequency; an optical head movably supported within said housing to record and/or reproduce the data to and from the disk; a spindle motor supported by said deck plate and which spins the disk; and a dynamic absorber 30/10 having a

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frequency that roughly corresponds to the predetermined frequency of said deck plate so as to absorb a vibration generated when the disk spins, wherein: said dynamic absorber comprises: a flexible connection member 30 connected to said deck plate, and a mass body 10 connected to the connection member, the connection member and the mass body move relative to said deck plate so as to absorb the vibration generated when the disk spins, and the connection member comprises a body, and flanges extending outward from the body to support said mass body apart from said deck plate.

As per claim 32, the recording and/or reproducing apparatus of claim 28, wherein said dynamic absorber is attached to said deck plate at a point where said deck plate experiences a maximum vibration amplitude (i.e. the outer periphery of the deck plate 90).

As per claim 33, the recording and/or reproducing apparatus of claim 28, further comprising supporting members (fig. 11, "91" or as members "321" in figure 8B) to movably support said deck plate within said housing, wherein said dynamic absorber is attached to said deck plate at a point where said deck plate experiences a maximum vibration shift from a geometric center of a shape defined by attachment points at which said supporting members are connected to said deck plate.

As per claim 34, the recording and/or reproducing apparatus of claim 28, further comprising supporting members to movably support said deck plate within said housing, wherein said dynamic absorber is attached to said deck plate at a point farthest from a geometric center of a shape defined by attachment points at which said supporting members are connected to said deck plate.

As per claim 35, the recording and/or reproducing apparatus of claim 27, wherein said dynamic absorber further comprises flexible connection members (fig. 11, "91" or as members "321" in figure 8B) connected to said deck plate at corresponding attachment points, and mass bodies connected to corresponding ones of the connection member; and the connection members and the mass bodies move relative to said deck plate so as to absorb the vibration generated when the disk spins.

As per claim 36, the recording and/or reproducing apparatus of claim 27, wherein said dynamic absorber absorbs the most vibration volume at roughly a natural frequency of said deck plate (operating frequency of about 75-85 Hertz, see the graph of "Curves of Vibration Acceleration-Rotation Rate" and bottom of page 15 of translation).

As per claim 37, a dynamic vibration absorber for a disk player that records and/or reproduces data to and from a disk, comprising: a deck base 92; a deck plate 90 movably supported by said deck base to support a spindle motor that spins the disk; a mass body 10 disposed around said deck plate; and a flexibly changeable connection member 30 that connects said deck plate and said mass body so as to allow a reciprocal action between said mass body and said deck plate, wherein: the reciprocal action of said mass body and said connection member reduces a vibration generated when the disk spins, and said mass body is disposed on a side (i.e. the top side) of said deck plate to reduce a vibration in a direction perpendicular to the side of said deck plate.

As per claim 38 and the process limitation of "wherein said mass body and said connection member comprise a combined member using an injection molding process," a "product by process" claim is directed to the product per se, no matter how actually made, see **In re Hirao**,

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190 USPQ 15 at 17 (footnote 3, CCPA, 5/27/76); **In re Brown**, 173 USPQ 685 (CCPA 5/18/72); **In re Luck**, 177 USPQ 523 (CCPA, 4/26/73); **In re Fessmann**, 180 USPQ 324 (CCPA, 1/10/74); **In re Thorpe**, 227 USPQ 964 (CAFC, 11/21/85). The patentability of the final product in a "product by process" claim must be determined by the product itself and not the actual process and an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not.

As per claim 40, the dynamic absorber of claim 17, wherein said mass body 10 comprises a plate comprising a slot (see fig. 3A) extending from an edge of the said mass body towards a center of said mass body, and the slot surrounds portions of the body of said connection member while being shaped to receive the body when said mass body is inserted onto said connection member 30.

5. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Ometz whose telephone number is (703) 308-1296.

The examiner can normally be reached on M-W, 6:00-4:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

A handwritten signature in black ink, appearing to read 'David L. Ometz', with a long horizontal flourish extending to the right.

David L. Ometz
Primary Examiner
Art Unit 2653

DLO
1/5/04